

# EXHIBIT 2

## **PAUL MCMANAMON, PH.D. EXHIBIT 2 – MATERIALS CONSIDERED**

### Patents & File Histories

- U.S. Pat. No. 5,679,009 (Okumura et al.)
- U.S. Pat. No. 6,046,800 (Ohtomo et al.)
- U.S. Pat. No. 6,986,671 (Margulis et al.)
- U.S. Pat. No. 7,209,221 (Breed et al.)
- U.S. Pat. No. 7,969,558 (Hall)
- U.S. Pat. No. 8,836,922 (Pennecot et al.)
- U.S. Pat. No. 8,767,190 (Hall)
- U.S. Pat. No. 9,086,273 (Gruver et al.)
- U.S. Pat. No. 9,285,464 (Pennecot et al.)
- U.S. Pat. No. 9,368,936 (Lenius et al.)
- U.S. Pat. App. Pub. No. 2002/0140924 (Wangler et al.)
- U.S. Pat. App. Pub. No. 2005/0195383 (Breed)
- File History for U.S. Pat. No. 8,836,922
- File History for U.S. Pat. No. 9,285,464

### Court Documents

- Plaintiff Waymo LLC's Notice of Motion and Motion for a Preliminary Injunction, filed Mar. 10, 2017
- Declaration of Pierre-Yves Droz in Support of Waymo's Motion for a Preliminary Injunction, and Exhibits, filed Mar. 10, 2017
- Declaration of Gregory Kintz in Support of Waymo's Motion for a Preliminary Injunction, and Exhibits, filed Mar. 10, 2017
- Declaration of Jordan Jaffe in Support of Waymo's Motion for a Preliminary Injunction, and Exhibits, filed Mar. 10, 2017 (including Exhibit 1, Plaintiff's List of Asserted Trade Secrets Pursuant to Cal. Code Civ. Proc. Section 2019.210)
- Declaration of Scott Boehmke in Support of Defendants' Opposition to Plaintiff Waymo LLC's Motion for Preliminary Injunction, and Exhibits, filed concurrently herewith
- Declaration of James Haslim in Support of Defendants' Opposition to Plaintiff Waymo LLC's Motion for Preliminary Injunction, and Exhibits, filed concurrently herewith
- Declaration of Michael Lebby in Support of Defendants' Opposition to Plaintiff Waymo LLC's Motion for Preliminary Injunction, and Exhibits, filed concurrently herewith

## Articles & Literature

- George Curatu, *Analysis & Design of Wide-angle Foveated Optical Systems*, Univ. of Cent. Fla. (2009).
- Xiaoyu Du et al., *Design of a Dynamic Dual-Foveated Imaging System*, 23 Optics Express 26033 No. 20 (Sept. 24, 2015).
- A.H. Faulkner, *Novel Electro-Optical Alignment Technique*, PROC IEE 125, No. 1 (Jan. 1978).
- Robert Hebert et al., *3-D Vision Techniques for Autonomous Vehicles*, The Robotics Inst., Carnegie Mellon Univ. (Aug. 1988).
- *Laser Radar – Progress & Opportunities in Active Electro-Optical Sensing*, Comm. on Review of Advancements in Active Electro-Optical Sys. To Avoid Tech. Surprise Adverse to U.S. Nat'l Sec., available at [http://www.nap.edu/catalog.php?record\\_id=18733](http://www.nap.edu/catalog.php?record_id=18733)
- Robert D. Leighty, *DARPA ALV Summary*, (Mar. 1986).
- T. Martinez et al., *Foveated, Wide Field-of-View Imaging System Using a Liquid Crystal Spatial Light Modulator*, 8 Optics Express, No. 10 (2001).
- Paul McManamon, *A History of Laser Radar in the United States*, Univ. of Dayton, Ladar & Optical Comm'ns Inst., PROC SPIE 7684 (May 4, 2010).
- Paul McManamon, *Field Guide to Lidar*, FG36 SPIE Field Guides (2015).
- Paul McManamon, *Review of Iadar: A Historic, Yet Emerging, Sensor Technology With Rich Phenomenology*, 51 Optical Eng'g (6) (June 2012).
- Vasyl Molebny, *Laser Radar: Historical Prospective – From the East to the West*, 56 Optical Eng'g (3) (Dec. 2016), available at <http://opticalengineering.spiedigitallibrary.org/article.aspx?articleid=2595584>.
- T. Nathan Mundhenk et al., *PanDAR: A Wide-Area, Frame-Rate, and Full Color LIDAR With Foveated Region Using Backfilling Interpolation Upsampling*, 9406 PROC SPIE-IS&T (2015).
- Torsten Possner et al, *Assembly of Fast-Axis Collimating Lenses with High Power Laser Diode Bars*, PROC SPIE 3952 (2000).
- Cornelius Weber & Jochen Triesch, *Implementations & Implications of Foveated Vision*, Recent Patents on Computer Sci. (2009).
- George M. Williams, Jr., *Optimization of Eyesafe Avalanche Photodiode Lidar for Automobile Safety & Autonomous Navigation Systems*, 56 Optical Eng'g (3), (Mar. 2017).